

Fig. 1

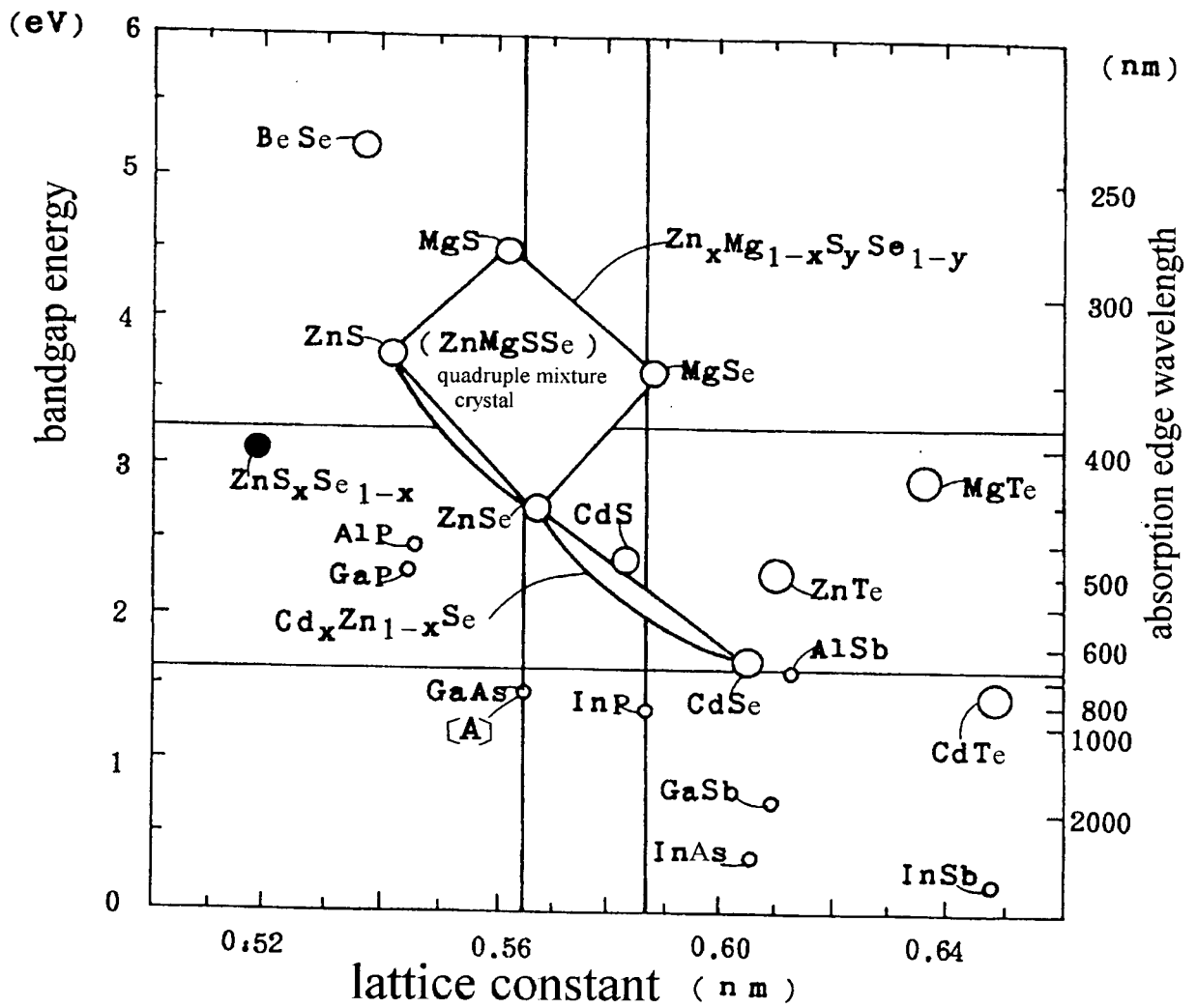


Fig. 2

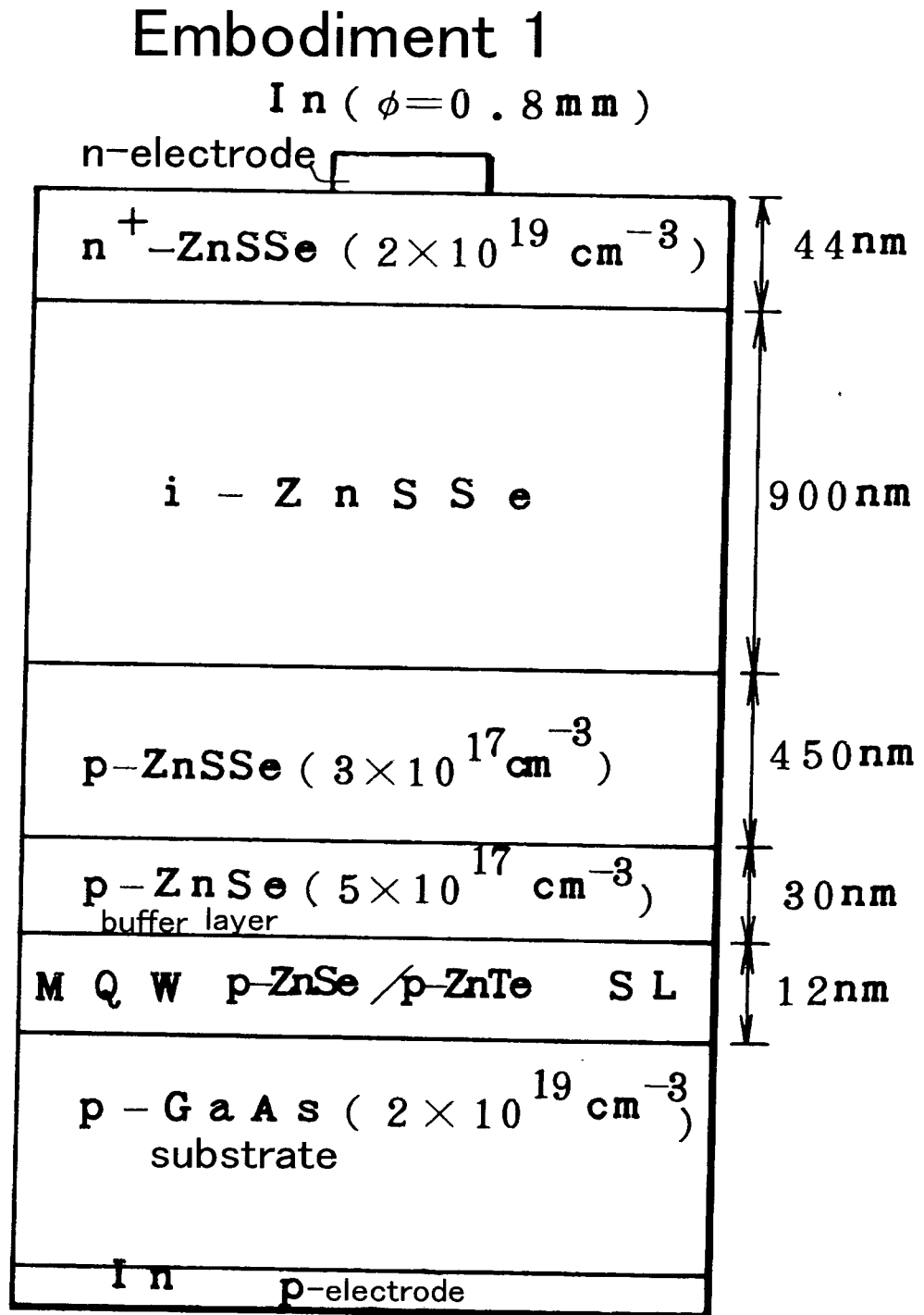


Fig. 3

Comparison Example 1

In ( $\phi=1.0\text{mm}$ )

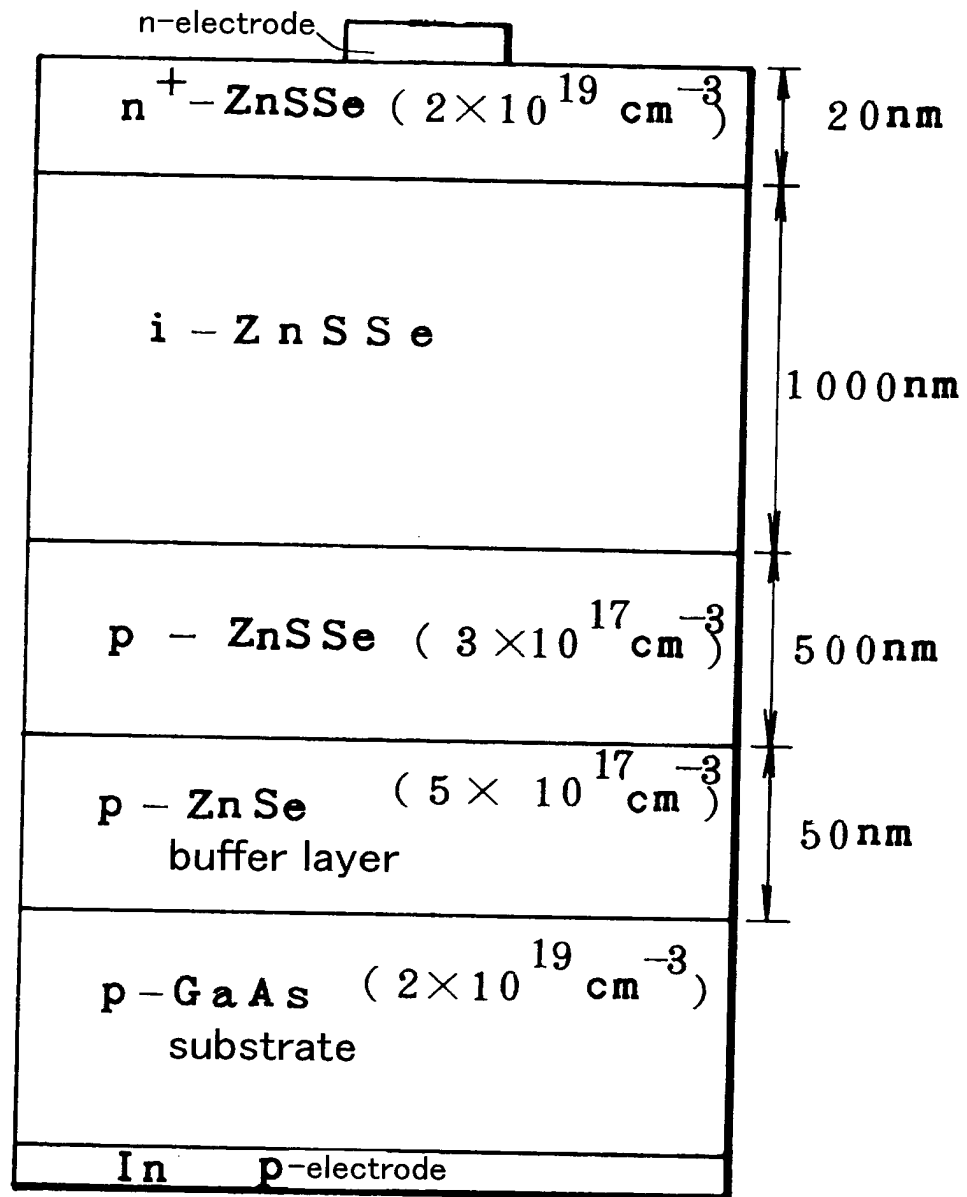


Fig. 4

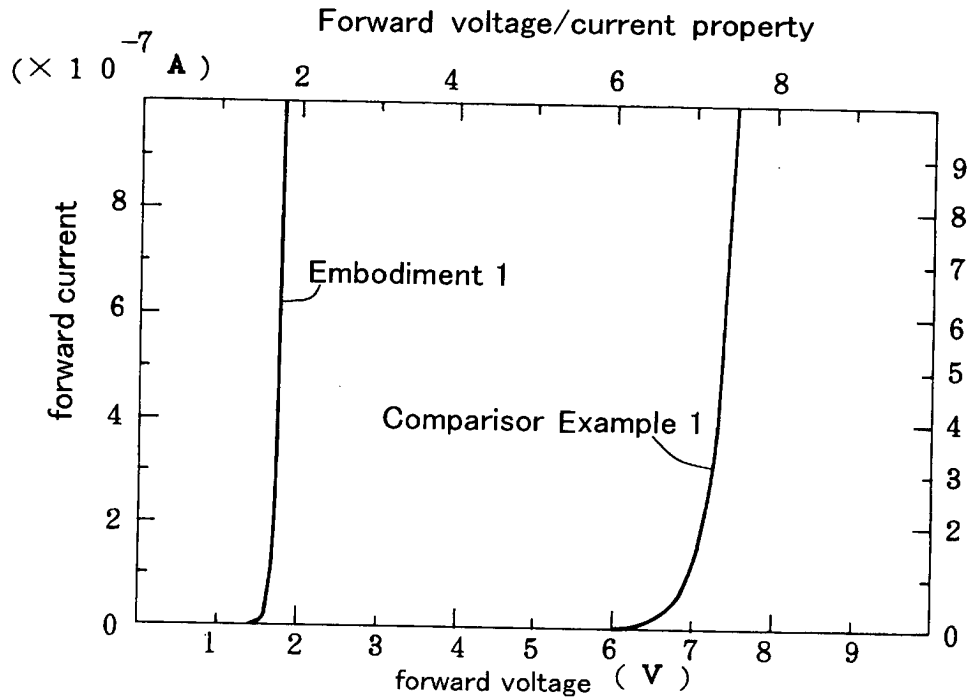


Fig. 5

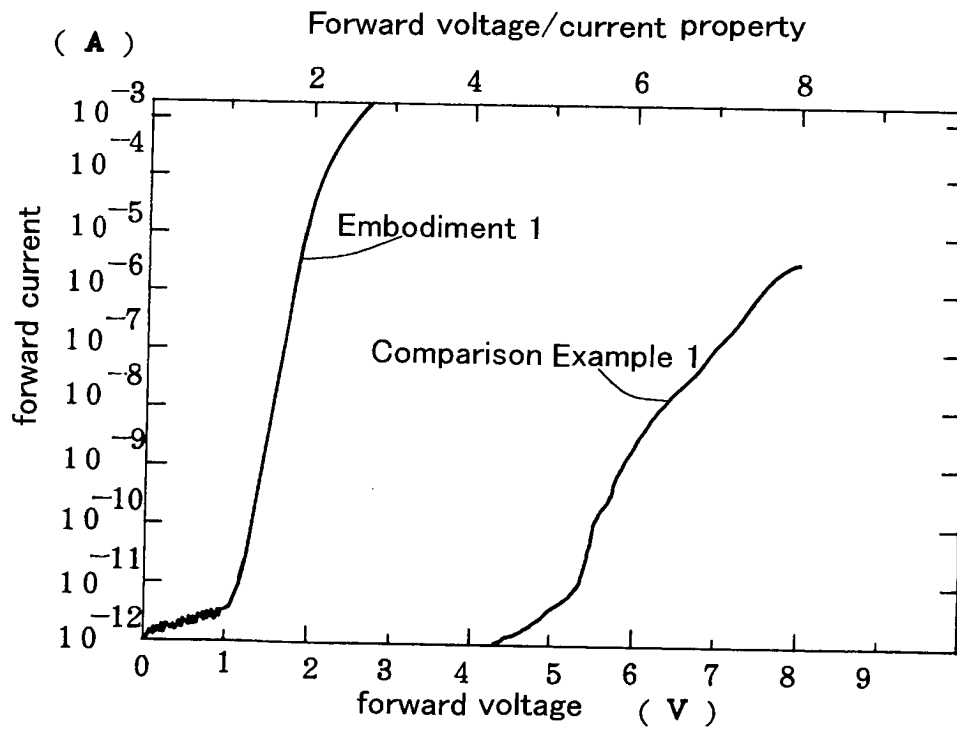


Fig. 6

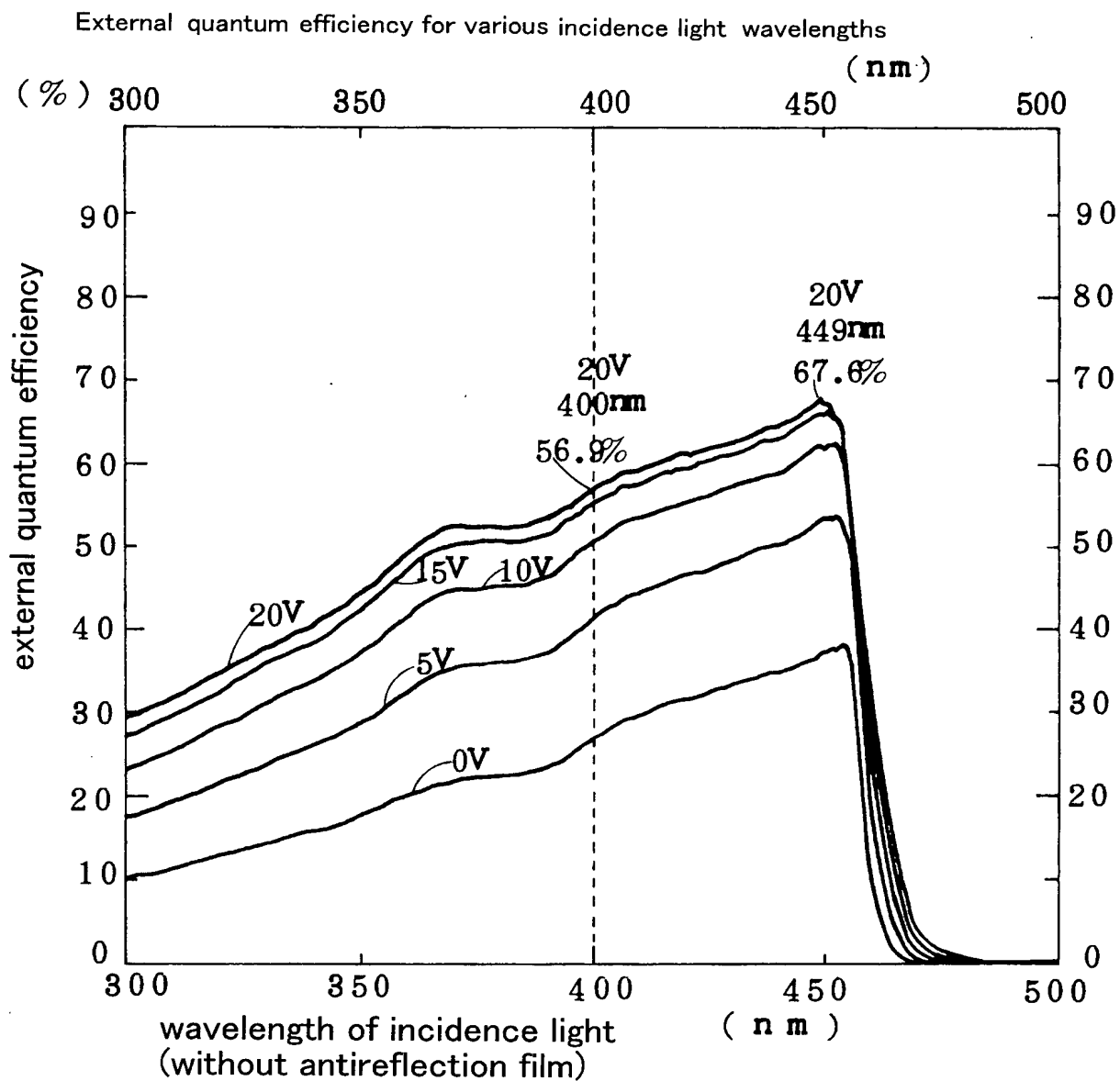


Fig. 7

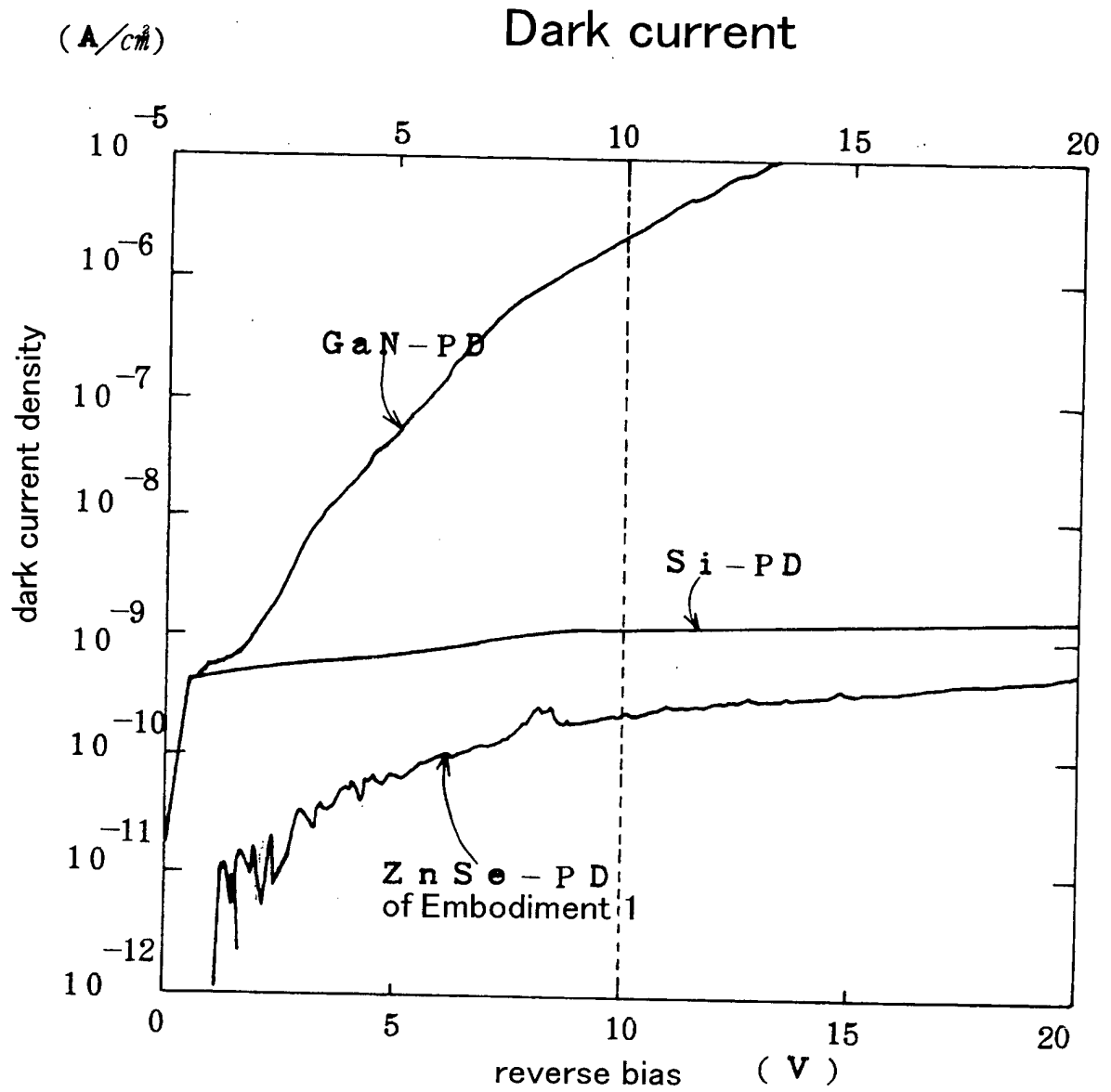


Fig. 8

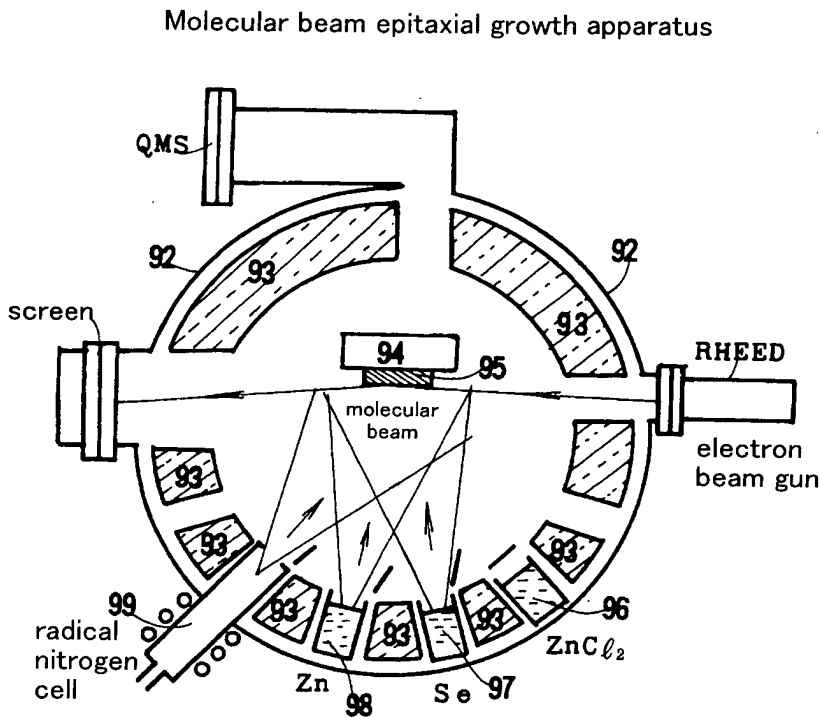


Fig. 9

( p - Z n S e )

M Q W	structure A	structure B
p-ZnTe	0.3nm	0.6nm
p-ZnSe	2.1nm	2.1nm
p-ZnTe	0.6nm	0.6nm
p-ZnSe	2.1nm	2.1nm
p-ZnTe	0.9nm	1.2nm
p-ZnSe	2.1nm	2.1nm
p-ZnTe	1.2nm	1.2nm
p-ZnSe	2.1nm	2.1nm
p-ZnT	1.5nm	1.8nm
p-ZnSe	2.1nm	2.1nm

( p - G a A s substrate )

Fig. 10

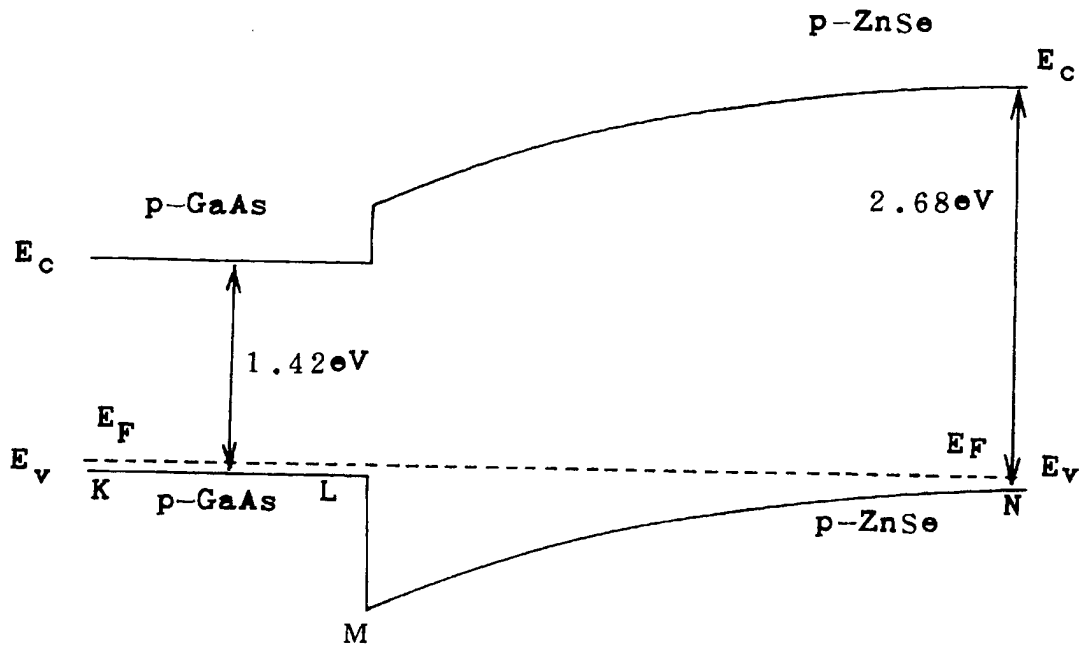


Fig. 11

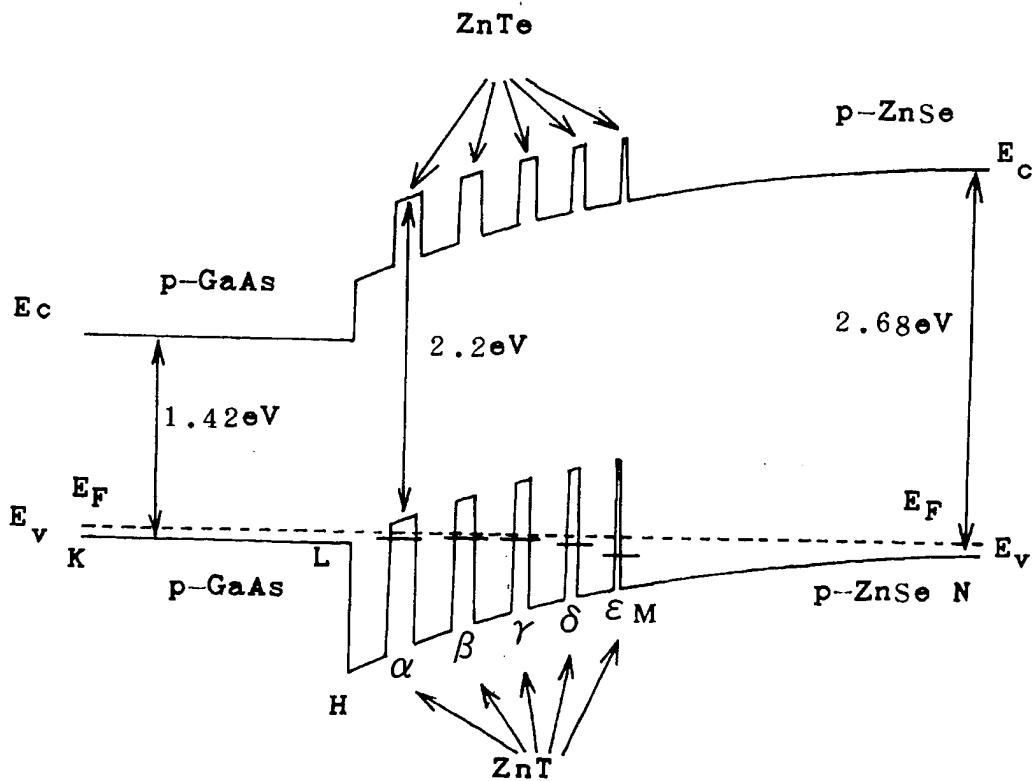




Fig. 12

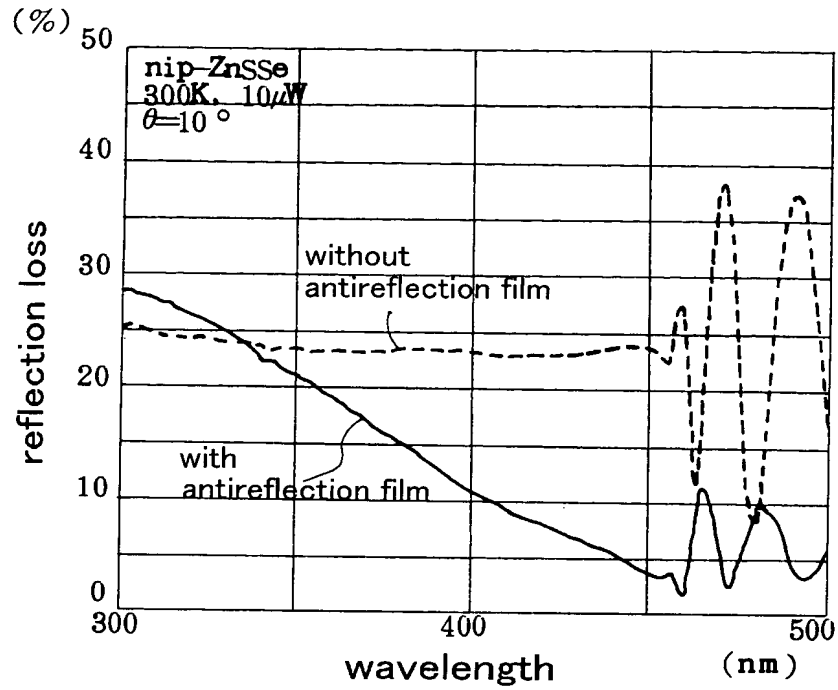


Fig. 13

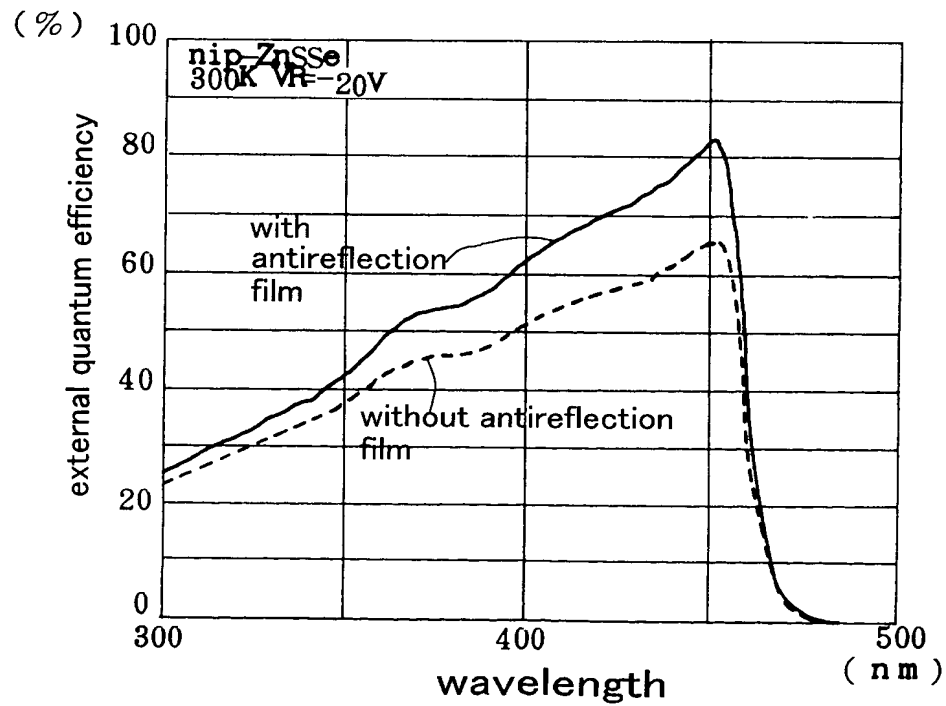


Fig. 14

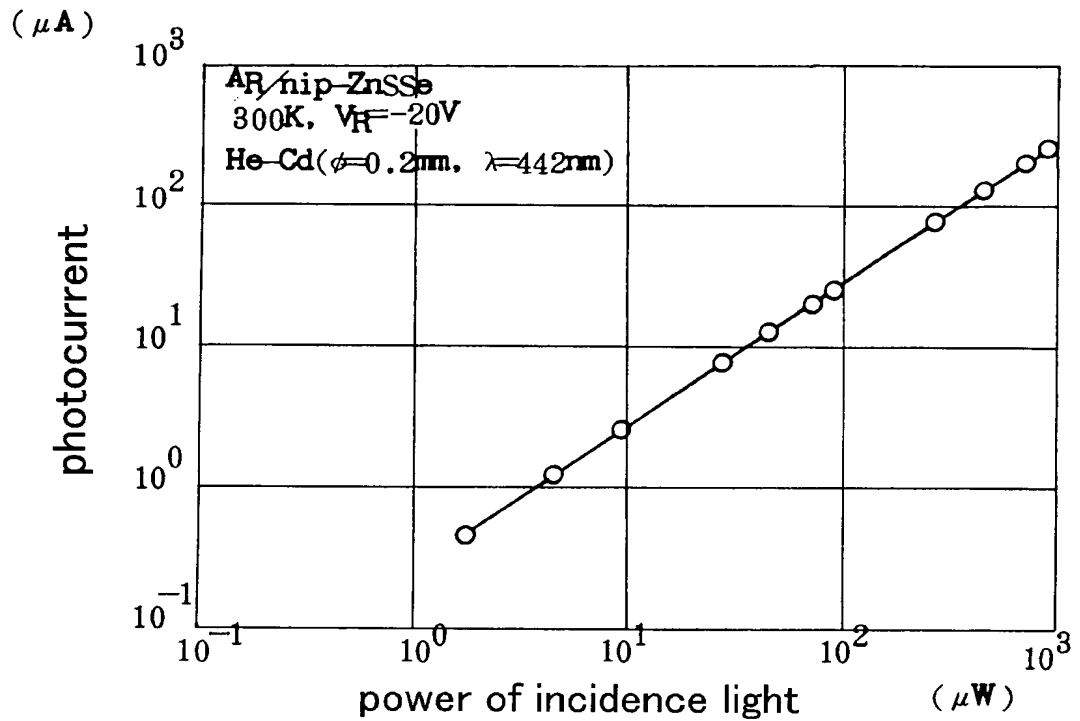


Fig. 15

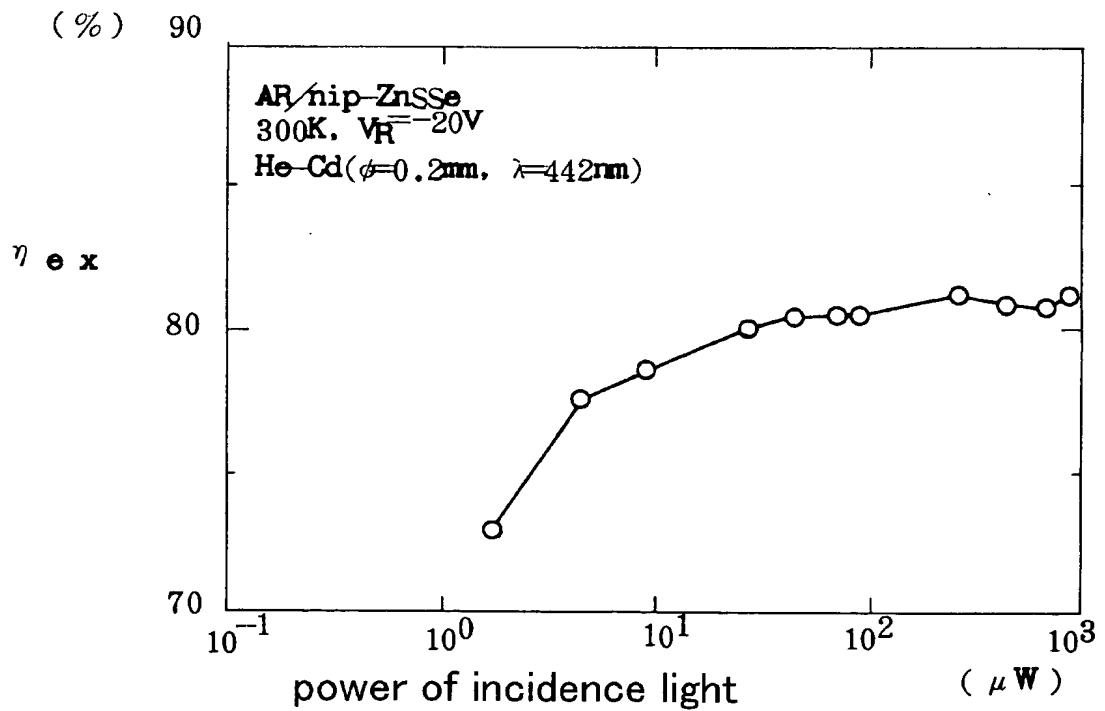


Fig. 16

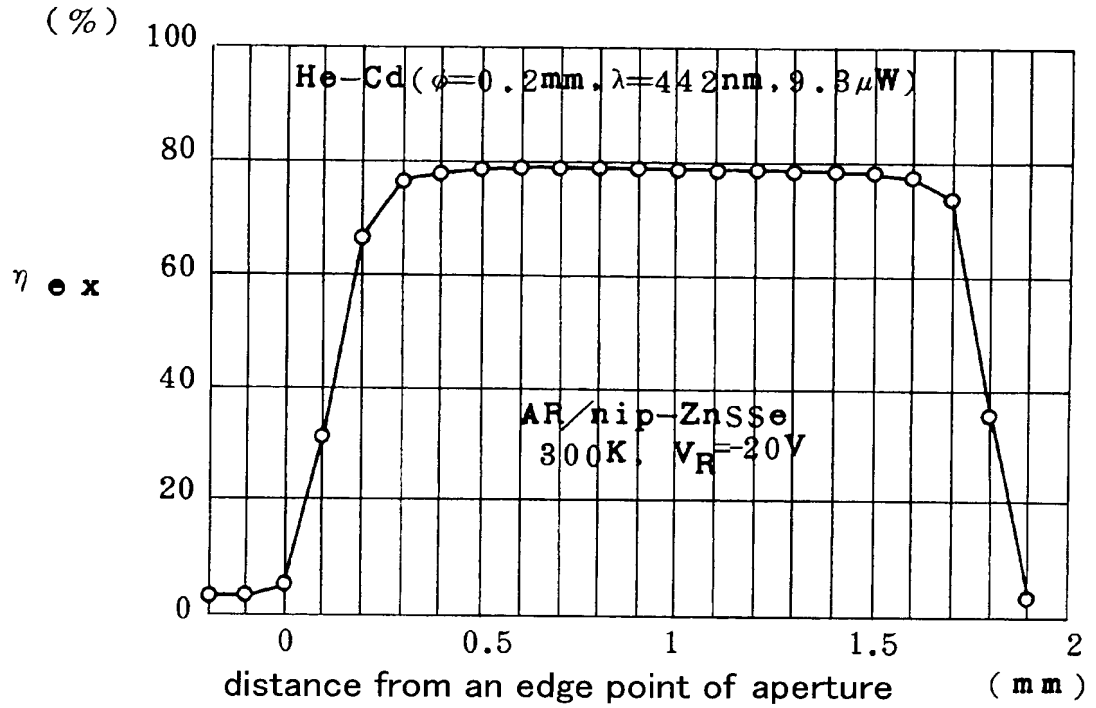


Fig. 17

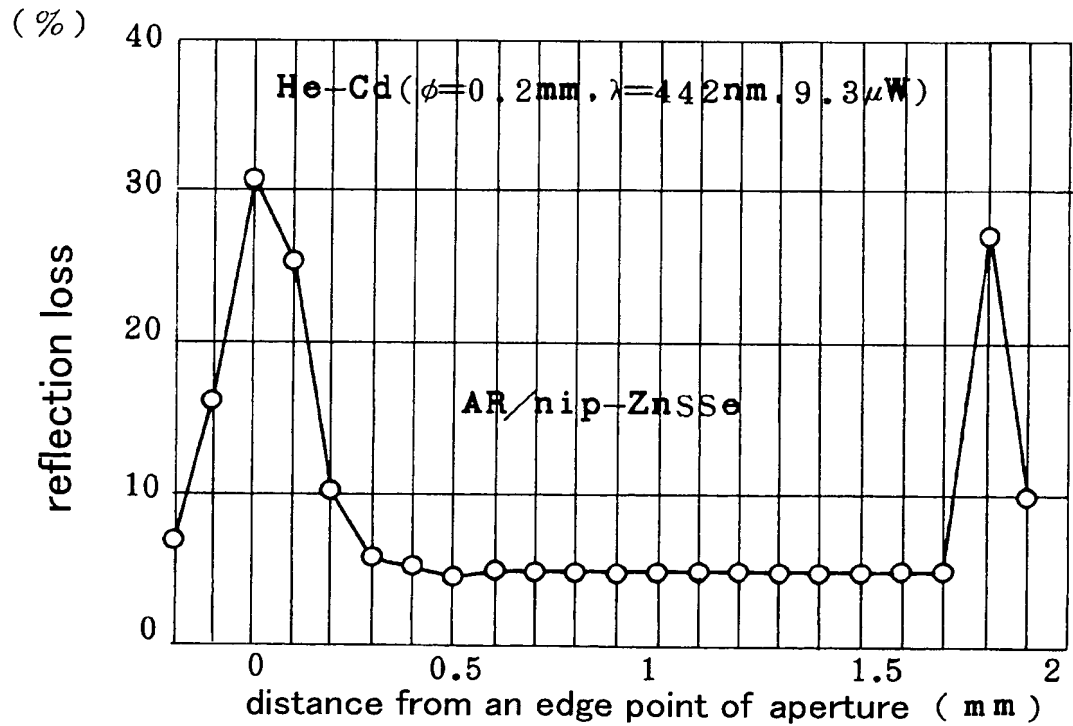


Fig. 18

## Avalanche photodiode

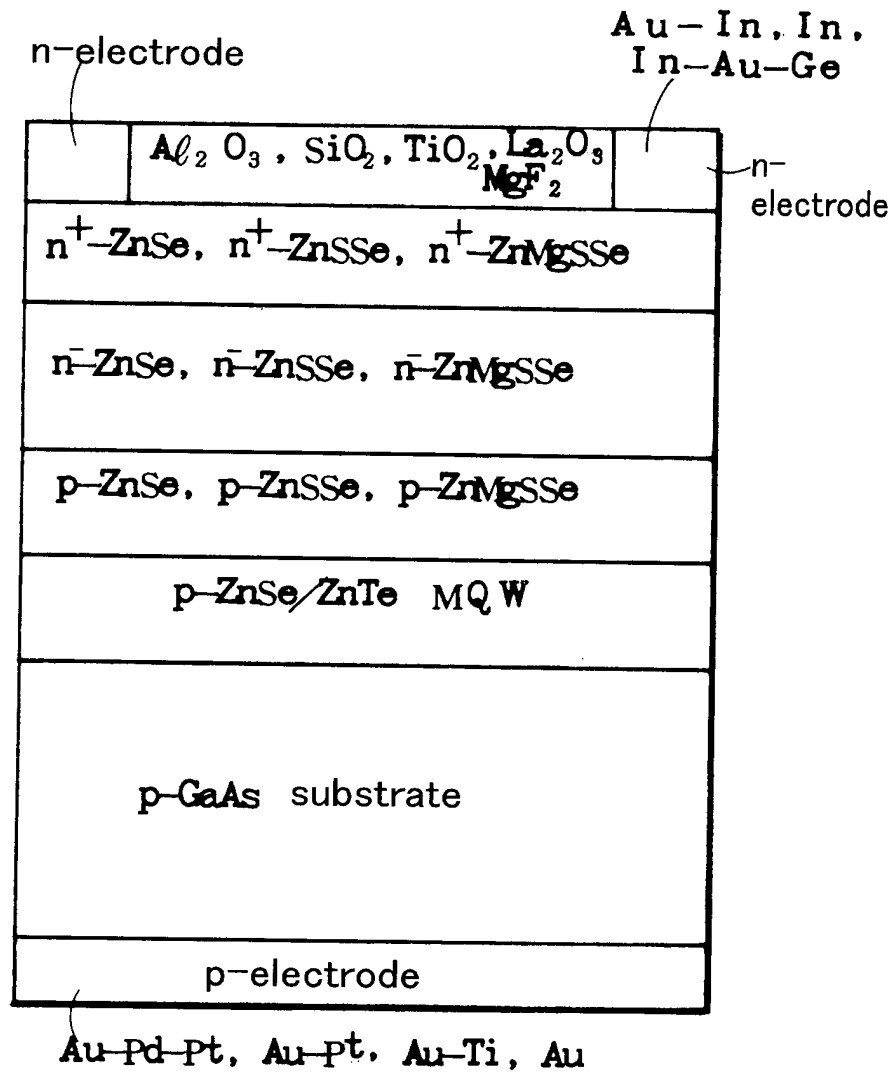


Fig. 19

### Embodiment 3

Avalanche photodiode

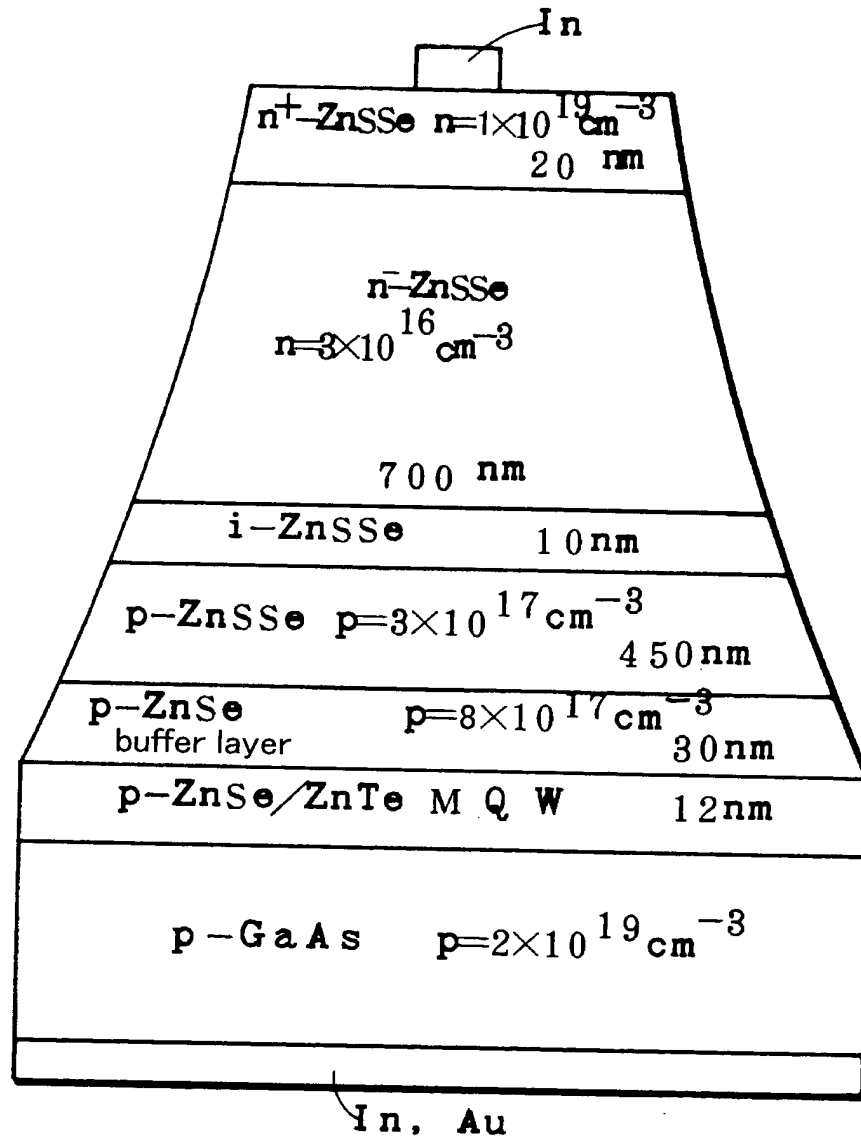


Fig. 20

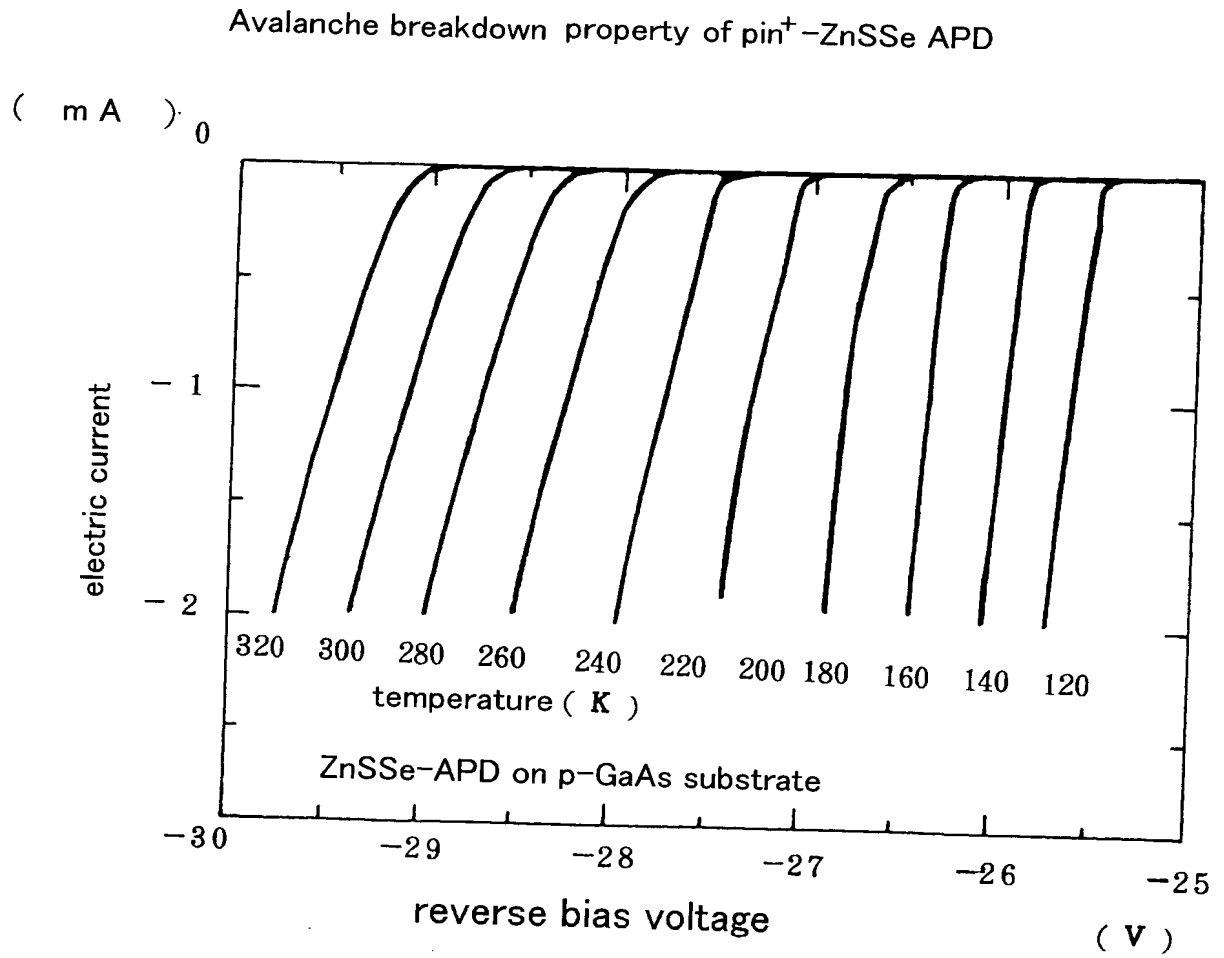


Fig. 21

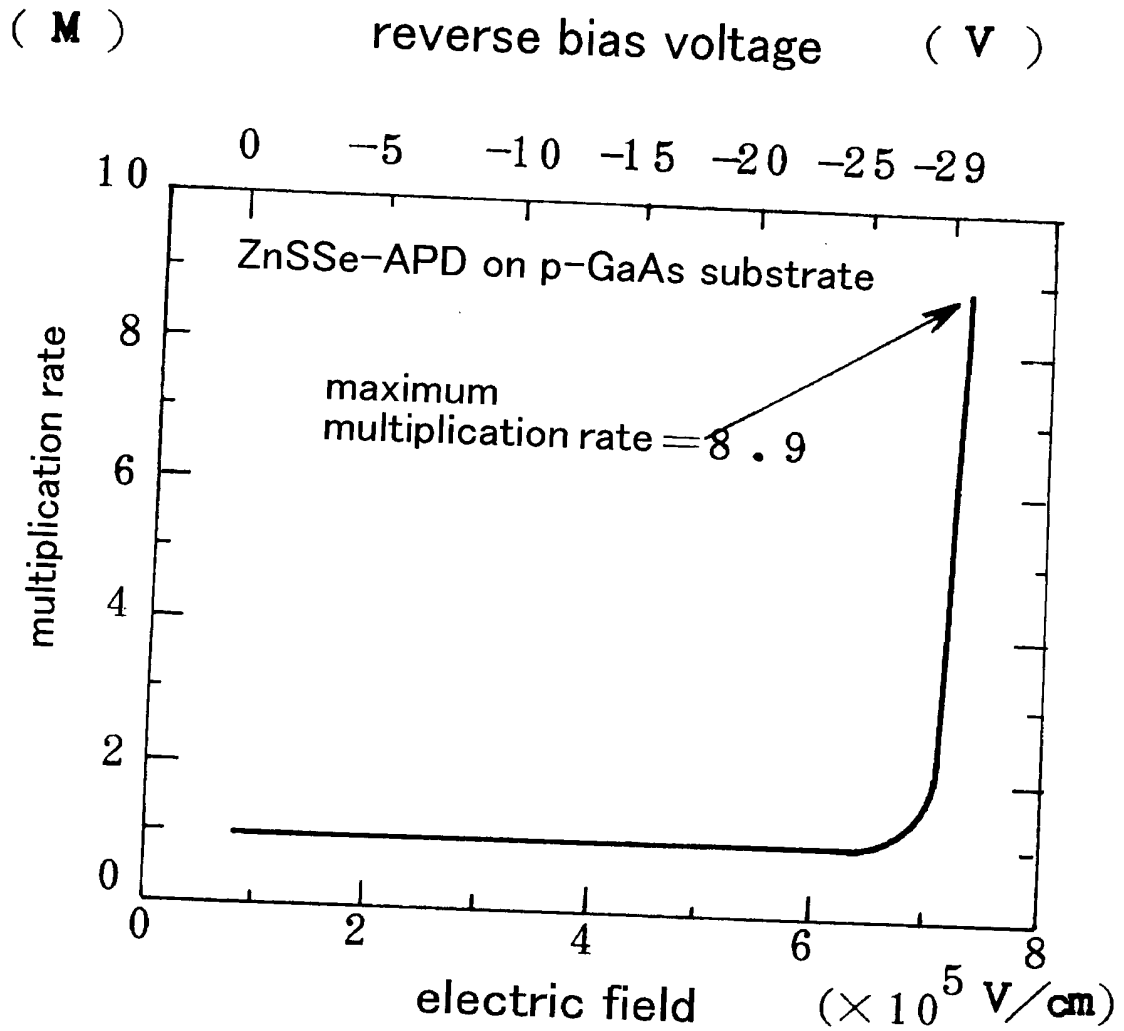


Fig. 22

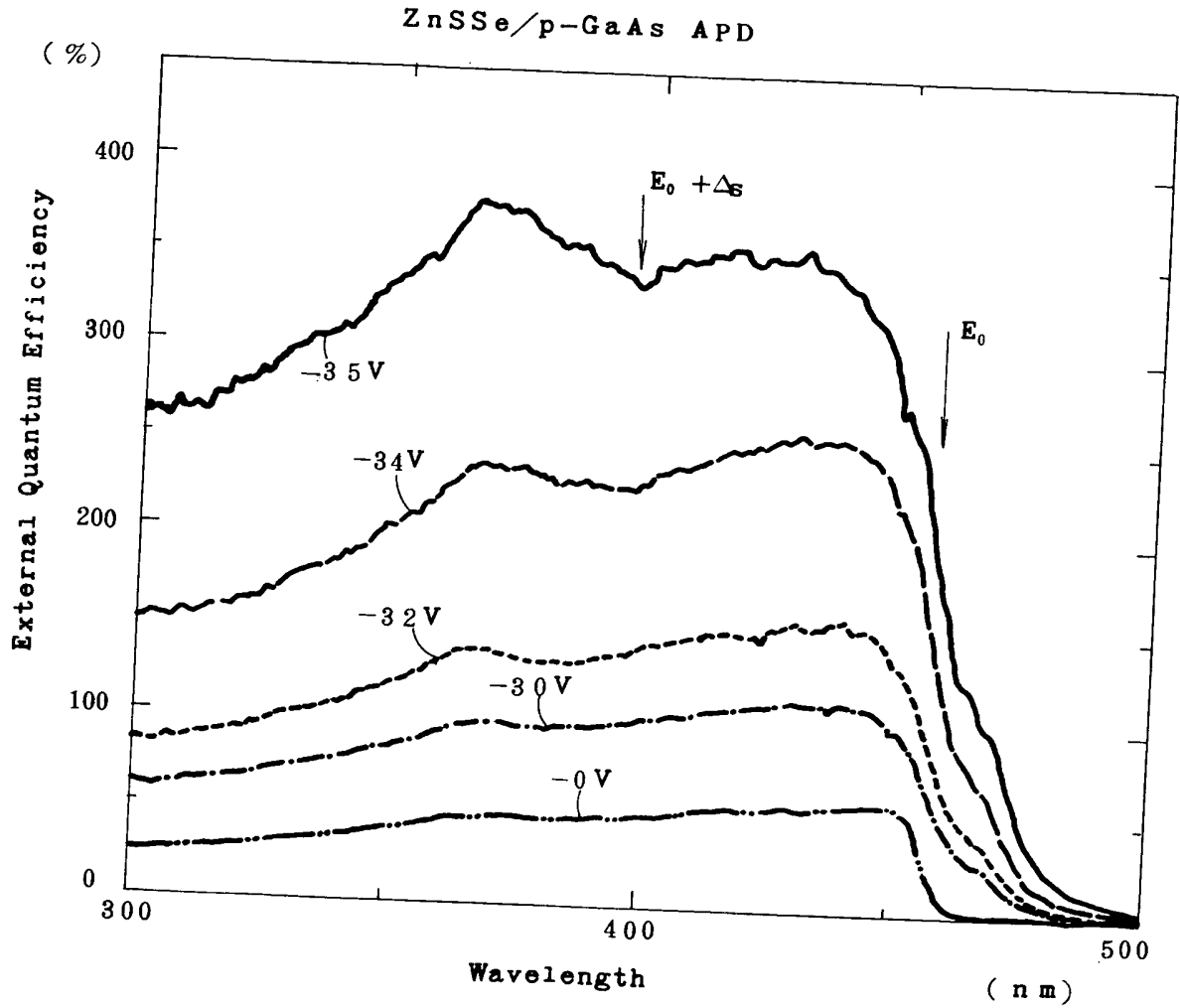




Fig. 23

M Q W of Embodiment 2

( p - Z n S e )

p - Z n T e	0 . 2 n m
p - Z n S e	2 . 0 n m
p - Z n T e	0 . 4 n m
p - Z n S e	2 . 0 n m
p - Z n T e	0 . 6 n m
p - Z n S e	2 . 0 n m
p - Z n T e	0 . 8 n m
p - Z n S e	2 . 0 n m
p - Z n T e	1 . 0 n m
p - Z n S e	2 . 0 n m

( p - G a A s substrate )